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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/702,722	11/01/2000	Shigeyuki Sudo	58799-029	9518

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EXAMINER

BLOUNT, STEVEN

ART UNIT PAPER NUMBER

2616

DATE MAILED: 09/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/702,722

Applicant(s)

SUDO ET AL.

Examiner

Steven Blount

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 14, 16 - 24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11 is/are allowed.
- 6) ☒ Claim(s) 12-14 and 16-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 12, 16, and 21 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. patent 6,061,564 to Akeda in view of U.S. patent 5,915,214 to Reece and U.S. patent 6,229,843 to Lomp et al.

With regard to claim 12, Akeda teaches a receiver that receives a paging channel (col 7 lines 62+) and after failing in registration (col 8 lines 17+) for a predetermined period of time (col 8 lines 30+), a signal is sent to shut off the power supply (col 8 lines 43+). This process is also discussed in detail in col 10 lines 5 through 35, and in a second embodiment in col 1, lines 10 - 30.

Akeda does not, however, teach the system to operate in a CDMA environment, through the use of a CDMA modem, or that the system turns off the receiver after registration operations are performed a predetermined number of times.

Reece teaches the equivalency of using a counter and a timer (to contact a control channel). See col 16 lines 21+. Reece also teaches that this process can occur in a CDMA environment. See col 8 lines 40+.

While Reece does, as previously noted, teach the environment to be possibly be one of CDMA, Reece does not explicitly teach the use of a CDMA modem (though

frankly this it is well known to those of ordinary skill in the art that such systems operate through the use of a modem).

Lomp et al teaches that the CDMA process can occur in a CDMA modem. See Col 3 lines 20+ and the abstract.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have counted the number of registration attempts in a CDMA environment in Akeda in light of the teachings of Reece, and to have further used a CDMA modem in Akeda/Reece, in light of the teachings of Lomp et al, in order to save battery power when attempting to register with a base station in a CDMA environment.

3. Claims 13 - 14, 17 - 18, and 22 - 23 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. patent 6,061,564 to Akeda in view of U.S. patent 5,915,214 to Reece and U.S. patent 6,229,843 to Lomp et al as applied above to claims 12, 16, and 21, and further in view of U.S. patent 5,574,973 to Borth et al.

Akeda/Reece/Lomp teach the invention as described above, but do not teach performing registration when the signal level is higher or equal to or less than a threshold. This is taught in Borth, as discussed above.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided threshold levels for the signal level received in the receiver in Akeda/Reece/Lomp in light of the teachings of Borth in order to provide a further means for conserving battery power.

4. Claims 19 - 20 and 24 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. patent 6,061,564 to Akeda in view of U.S. patent 5,915,214 to Reece and

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U.S. patent 6,229,843 to Lomp et al as applied above to claims 12, 16, and 21, and further in view of U.S. patent 5,450,613 to Takahara et al.

Akeda/Reece/Lomp teach the invention as described above, but do not teach the use of an "out of service area" indicator. This is taught in Takahara et al. See the last sentence of the abstract and also col 13 lines 35+. It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided Akeda/Reece/Lomp with an "out of service area indicator," in light of the teachings of Takahara et al, in order that a user may be conveniently made aware of when the handset is out of the coverage area.

5. Claims 12, 16, and 21 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. patent 5,544,196 to Tiedemann Jr. et al in view of U.S. patent 6,229,843 to Lomp et al.

Tiedemann Jr. et al teaches using a pilot signal ("pilot PN code) in col 2 lines 8+, wherein registration is attempted a number of times using an "access probe sequence" as described in col 4 lines 40+, where it is further noted that if access is not successful after a predetermined number of tries, the attempt is abandoned. See col 4 lines 64+.

Tiedemann does not however teach this to be accomplished using a "CDMA modem attached to the receiver."

Carrying out the above in a "modem" is taught in Lomp, as discussed in col 2 lines 27+. It is noted that Lomp also teaches successfully acquiring a pilot signal and searching it with a local PN sequence (col 35 lines 12+). Note also the use of sleep

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mode when the mobile fails to recognize its paging address, as taught in col 15 lines 43+.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided Tiedemann Jr et al with the CDMA processing capability in the form of an attachable (connectable) modem, in light of the teachings of Lomp, in order to provide a more compact and potentially portable (connectable) means for providing a receiver with CDMA registration capabilities.

6. Claims 13 – 14, 17 – 20, and 22 – 24 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. patent 5,544,196 to Tiedemann Jr. et al in view of U.S. patent 6,229,843 to Lomp et al as applied above to claims 12, 16, and 21, and further in view of U.S. patent 5,450,613 to Takahara et al.

With regard to claims 13 – 14 and 17 – 18 and 22 – 23, Tiedemann Jr. et al/Lomp teach the invention as described above but do not teach the registration process to resume from sleeping when the signal is higher or equal to a threshold value. This is taught in Takahara. See the discussion of Takahara above.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided Tiedemann Jr. et al/Lomp with a sleep timer that becomes activated or deactivated based on threshold energy values in light of the teachings of Takahara et al in order to provide a more energy efficient device.

With regard to claims 19 – 20 and 24, see col 3 lines 15+ of Takahara.

7. Claims 1 - 11 are currently allowable over the prior art of record.

### REMARKS

8. Applicant's arguments filed 6/28/06 have been fully considered but they are not persuasive.

The applicant argues that there is no motivation to combine "the teachings regarding CDMA" (apparently referring to Lomp et al wherein this is taught) with Akeda, which is not a CDMA system. Applicant also argues that Akeda teaches a non-CDMA system which would be incompatible with Lomp et al, which uses CDMA as its multiplexing scheme.

In response, the examiner notes Akeda does not limit its teachings of a means for saving battery power to any specific multiplexing system, and no specific multiplexing system is taught. Therefore, there cannot be any incompatibility. The examiner further notes that using applicants reasoning, Akeda cannot ever be used as a reference, since it would always result in incompatibility, given that Akeda's teachings are generic to any multiplexing scheme.

As to there not being any motivation to combine the references, the examiner initially notes that it is well known that the motivation to combine the references may come from the primary reference, the secondary reference(s), or the ordinary skill in the art.

There are many reasons one of ordinary skill in the art would be motivated to combine the teachings of Akeda with those of Lomp et al. Lomp et al teaches the use of a sleep timer which would be useful in Akeda for obvious reasons. Lomp et al also teaches the use of the system in a modem that would make the system potentially

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portable. Last but certainly not least, Lomp et al teaches the use of CDMA in the context of a system capable of going to sleep. Further, The benefits of a CDMA system are well known in the art and are many (ie, reduced interference, for instance). Therefore, there are many reasons one of ordinary skill in the art would be motivated to combine the teachings of Lomp with those of Akeda in view of these benefits, and to do so would produce a more efficient communication system, that would additionally meet the limitations of the applicants claimed invention.

Finally, the examiner notes that Lomp et al teach searching the incoming pilot signal with a locally generated pilot code sequence (SPRT) in col 35 lines 13+ (see also col 13 lines 40+). Akeda teaches ending battery power wasting processes such as these when the mobile unit is out of range. It is noted that Akeda deals with "position registration". However, the examiner believes that this teaching, whose goal is to conserve battery power, is fundamental enough to apply to other types of registration processes, including registration via synchronization of the PN codes, as taught in Lomp et al, as described immediately above. This is particularly true in view of the teachings of the sleep cycle mentioned in Lomp et al in col 15 lines 5 to 45.

9. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 2/17/06 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Blount whose telephone number is 703-305-0319. The examiner can normally be reached on M-F 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To, can be reached on 571 - 272 - 7629. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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CHI PHAM  
SUPERVISORY PATENT EXAMINER 9/1/16